No. 200100284

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

USDA - Agriculture Research Service

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE , OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE [illegible]84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'N6201'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this ninth day of April, in the year two thousand two.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

REPRODUCE LOCALLY. *Include form number and date on all reproductions*

Form Approved - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1 NAME OF OWNER: USDA- Agricultural Research Service

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME: ~~NCTCPR92-40~~ NTCPR 92-40 BT: 9/21/2001

3. VARIETY NAME: N6201

4 ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*:
3127 Ligon St.
Raleigh NC 27607

5. TELEPHONE *(include area code)*: (919) 513-1480

6. FAX *(include area code)*: (919) 856-4598

FOR OFFICIAL USE ONLY

PVPO NUMBER: 200100284

FILING DATE: 9/19/2001

7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)*: USDA-ARS (Gov. Agency)

8. IF INCORPORATED, GIVE STATE OF INCORPORATION:

9. DATE OF INCORPORATION:

10 NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. *(First person listed will receive all papers)*
Thomas E. Carter, Jr.
3127 Ligon St.
Box 7631
Raleigh NC 27607

FEES RECEIVED

FILING AND EXAMINATION FEES: $ 2,705.00 DATE 9/19/2001

CERTIFICATION FEE: $ 320 DATE 2/27/02

11 TELEPHONE *(Include area code)*: (919) 513-1480 BT: 9/21/2001

12. FAX *(Include area code)*: (919) 85604598

13. E_MAIL: tommy_carter@ncsu.edu

14. CROP KIND *(Common Name)*: soybean

15 GENUS AND SPECIES NAME OF CROP: Glycine max

16. FAMILY NAME *(Botanical)*: Leguminosae

17. IS THE VARIETY A FIRST GENERATION HYBRID? ☐ YES ☒ NO

18 CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)

a. ☒ Exhibit A. Origin and Breeding History of the Variety
b. ☒ Exhibit B. Statement of Distinctness
c. ☒ Exhibit C. Objective Description of Variety
d. ☐ Exhibit D. Additional Description of the Variety *(Optional)*
e. ☒ Exhibit E. Statement of the Basis of the Owner's Ownership
f. ☒ Voucher Sample *(2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)*
g. ☐ Filing and Examination Fee ($2,450), made payable to "Treasurer of the United States" *(Mail to the Plant Variety Protection Office)*

19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? *See Section 83(a) of the Plant Variety Protection Act)*
☒ YES *(If "yes", answer items 20 and 21 below)* ☐ NO *(If "no," go to item 22)*

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF ~~GENERATIONS~~? CLASS ES
☒ YES ☐ NO

21. IF "YES" TO ITEM 20, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
☒ FOUNDATION ☐ REGISTERED ☒ CERTIFIED

22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES?
☐ YES ☒ NO
IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. *(Please use space indicated on reverse.)*

23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT *(PLANT BREEDER'S RIGHT OR PATENT)*?
☐ YES ☒ NO
IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. *(Please use space indicated on reverse.)*

24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER		SIGNATURE OF OWNER	
Thomas E. Carter Jr.			
NAME *(Please print or type)*		NAME *(Please print or type)*	
Thomas E. Carter, Jr.			
CAPACITY OR TITLE	DATE	CAPACITY OR TITLE	DATE
Research Geneticist	2-01-01		

STD-470 (6-98) designed by the Plant Variety Protection Office with WordPerfect 6.0a. Replaces STD-470 (03-96) which is obsolete. *(See reverse for instructions and information collection burden statement)*

S&T-470 ADDENDUM

REPRODUCE LOCALLY. *Include form number and date on all reproductions*

Form Approved - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

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1. NAME OF OWNER

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME

3. VARIETY NAME
N6201

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*

5. TELEPHONE *(include area code)*

6. FAX *(include area code)*

FOR OFFICIAL USE ONLY

PVPO NUMBER

FILING DATE

7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)*

8. IF INCORPORATED, GIVE STATE OF INCORPORATION

9. DATE OF INCORPORATION

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. *(First person listed will receive all papers)*

FOR OFFICIAL USE ONLY

FILING AND EXAMINATION FEES:
$
DATE

CERTIFICATION FEE:
$
DATE

11. TELEPHONE *(Include area code)*

12. FAX *(Include area code)*

13. E-MAIL

14. CROP KIND *(Common Name)*

18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)

a. ☐ Exhibit A. Origin and Breeding History of the Variety
b. ☐ Exhibit B. Statement of Distinctness
c. ☐ Exhibit C. Objective Description of Variety
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19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? *See Section 83(a) of the Plant Variety Protection Act)*

☒ YES *(If "yes", answer items 20 and 21 below)* ☐ NO *(If "no," go to item 22)*

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? ☐ YES ☐ NO

IF YES, WHICH CLASSES? ☒ FOUNDATION ☐ REGISTERED ☒ CERTIFIED

21. DOES THE OWNER SPECIFY THAT THE CLASSES BE LIMITED AS TO NUMBER OF GENERATIONS? ☐ YES ☒ NO

IF YES, SPECIFY THE NUMBER 1, 2, 3, *etc.* ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

(If additional explanation is necessary, please use the space indicated on the reverse.)

22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES?

☐ YES ☐ NO

IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. *(Please use space indicated on reverse.)*

23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT *(PLANT BREEDER'S RIGHT OR PATENT)*?

☐ YES ☐ NO

IF YES, GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. *(Please use space indicated on reverse.)*

24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

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Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER

NAME *(Please print or type)*

CAPACITY OR TITLE

DATE

SIGNATURE OF OWNER
Thomas E. Carter, Jr.

NAME *(Please print or type)*

CAPACITY OR TITLE

DATE

INSTRUCTIONS

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Complete application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybr variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable *(in the sens that it will reproduce an entire plant)* tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for $2 ($320 filing fee and $2,385 examination fee), payable to "Treasurer of the United States" *(See Section 97.6 of the Regulations and Rules of Practice.)* Partia applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfiled. Mail application and other requirements to Plant V Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on t face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. DO NOT use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the an of $320 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office
Telephone: (301) 504-5518
FAX: (301) 504-5291
Homepage: http://www.ams.usda.gov/science/pvp.htm

ITEM

18a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified

18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If new variety is most similar to one variety or a group of related varieties:

(1) identify these varieties and state all differences objectively;
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.

18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as complete as possible to describe your variety.

18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, *etc.*

18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO

19. If "Yes" is specified *(seed of this variety be sold by variety name only, as a class of certified seed)*, the applicant MAY NOT reverse this affirmative decisi after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. *(See Regulations and Rules of Practice, Section 97.103).*

21. *See Section 83 of the Act for the Contents and Term of Plant Variety Protection.*

22. *See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.*

23. *See Section 5.5 of the Act for instructions on claiming the benefit of an earlier filing date.*

21. CONTINUED FROM FRONT *(Please provide a statement as to the limitation and sequence of generations that may be certified.)*

22. CONTINUED FROM FRONT *(Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)*

23. CONTINUED FROM FRONT *(Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)*

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. *(See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)*

To avoid conflict with other variety names in use, the applicant must check the variety names proposed by contacting: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center--East, Beltsville, MD 20705. Telephone: (301) 504-8089.

Attachments to Application for Plant Variety Protection Certificate 200100284

18A. 1- "N6201" (NTCPR92-40) was developed by Dr. Thomas E. Carter, Jr., Research Geneticist, USDA-ARS, Raleigh, North Carolina. The line is an F_6 –derived selection from the cross of 'Nakasennari' x 'Young'. Young was a widely grown variety in the southeastern USA in the 1980's. Nakasennari is a Japanese variety.

2- Young and Nakasennari were crossed in 1988 at Raleigh, NC, and F_1 plants were grown at the USDA-ARS Tropical Agriculture Research Station (TARS), Isabela, PR, the following winter. All F_2 plants were grown and harvested as a single bulk at Clayton, NC in 1989. Subsequently, the seed within this bulk were selected for large seed size. The largest F_3 seed were planted at TARS, and 1 pod was picked from each plant at maturity. The F_4 seed were increased at Clayton, NC and allowed to stand well past maturity and rated for pod dehiscence in 1990. Plants apparently resistant to pod dehiscence were harvested individually and assayed for 100-seed weight and visual appearance. Progeny of promising F_4 plants were grown and bulk harvested on an individual row basis at TARS the following winter. In 1991, individual F_6 plants were harvested and assayed for 100-seed weight and visual appearance at Clayton, NC. Approximately 30 F_6 plants were selected for progeny increase at TARS that winter and were subsequently yield tested at Plymouth, NC in 1992.

3- In five years of testing and increase, N6201 has demonstrated no instability.

4- Off type hila color (slightly darker or lighter) can occur at a rate less than 2%.

18B. - N6201 has yellow seed and clear hila, purple flowers, gray pubescence, determinate growth habit, and round leaves. N6201 is resistant to frog eye leaf spot (*Cercospora sojina* Hara), bacterial pustule (*Xanthomonas campestris pv. glycines* (Nakano) Dye) and most strains of Soybean Mosaic Virus, but susceptible to root knot (*Meloidogyne*) species of nematode. In Field Tests N6201 was moderately lodging resistant, exhibiting an average lodging score of 2.3, compared with Brim's score of 2.0 [a score of 1 indicates no lodging while 5 indicates a prostrate plant]. N6201 plant height averaged 17 cm shorter than Young. N6201 is very resistant to pod dehiscence (shattering) after maturation.
In some environments, seed will exhibit a light brown mottling which can be detrimental to acceptance in the soyfoods market. The basis for this mottling is unknown at present. Experimental production is advised prior to commercial marketing to ensure high seed quality. The lower yield

4

potential of N6201, compared to commodity-type varieties, limits its use to specialty purposes.

N6201 is approximately three days later in maturity than 'Brim' and is adapted to similar latitudes (approximately 31° to 37°). In ten North Carolina environments, it produced 7% lower yield than Brim in wide (95 cm) row spacings when grown under full season conditions. In these same environments, the 100-seed weight of N6201 averaged 23.1g which was larger than that of Brim (14.0g), and most other group VI varieties. In the 1995 USDA Cooperative Uniform Soybean Yield Tests, the average seed protein and oil concentrations on a zero percent
moisture basis for N6201 and Brim were 42.3 and 20.7 % and 42.9 and 20.2%, respectively.

N6201 was yield tested at ten North Carolina locations from 1993 through 1997, and at nine and 23 southern regional locations in 1994 and 1995 as part of the USDA Cooperative Uniform Soybean Yield Tests. N6201 was also yield tested in three North Carolina environments by the North Carolina Official Variety Testing Program in 1995. Please refer to attached Tables 1, 2, and 3.

18C. See attached form.

18D. None.

18E. See attached form.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT C
(Soybean)

OBJECTIVE DESCRIPTION OF VARIETY SOYBEAN (*Glycine max* (L.) Merr.)

200100264

NAME OF APPLICANT(S) USDA- Agricultural Research Service

ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)*
3127 Ligon St.
Box 7631
Raleigh NC 27607

~~FOR OFFICIAL USE ONLY~~
PVPO NUMBER 200100264

VARIETY NAME
N6201

TEMPORARY OR EXPERIMENTAL DESIGNATION
NTCPR92-40

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g. [0][9][9] **or** [0][9] **) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used:**

Please answer all questions for your variety; lack of response may delay progress of your application.

A. MORPHOLOGY

Seed Shape:

[2]

1 = Spherical (L/W, L/T, and T/W ratios < 1.2)
2 = Spherical-Flattened (L/W ratio > 1.2; L/T ratio < 1.2)
3 = Elongate (L/T ratio > 1.2; T/W ratio < 1.2)
4 = Elongate-Flattened (L/T ratio > 1.2;T/W ratio > 1.2)

L/W= 1.4
L/T= 1.1
T/W= 1.3

Seed Coat Color:

[1]

1 = Yellow 2 = Green 3 = Brown 4 = Black 5 = Other (*Please Specify*) _____

Seed Coat Luster:

[1]

1 = Dull 2 = Shiny

Seed Size:

[2][3] grams/100 seeds

Hilum Color:

[2]

1 = Buff 2 = Yellow 3 = Brown 4 = Gray 5 = Imperfect Black
6 = Black 7 = Other (*Please Specify*) _____

Cotyledon Color:

[2]

1 = Yellow 2 = Green

A. MORPHOLOGY (*Continued*)

Seed Protein Peroxidase Activity:

[ ] 1 = Low 2 = High

20010204

Hypocotyl Color:

[1] 1 = Green 'Evans' or 'Davis' | 2 = Green with Bronze Bands below Cotyledon 'Woodworth' or 'Tracy' | 3 = Light Purple below Cotyledons 'Beeson' or 'Pickett 71' | 4 = Dark Purple extending to unifoliolate leaves ('Hodgson', 'Coker', or 'Hampton 266A')

Leaf Shape:

[2] 1 = Lanceolate 2 = Oval 3 = Ovate 4 = Other (*Please Specify*) _____

Flower Color:

[2] 1 = White 2 = Purple 3 = White with a Purple Throat

Pod Color:

[1] 1 = Tan 2 = Brown 3 = Black

Pubescence Color:

[1] 1 = Gray 2 = Brown (Tawny) 3 = Light Tawny

Plant Habit:

[1] 1 = Determinate 2 = Semi - Determinate 3 = Indeterminate 4 = Intermediate

Maturity Group:

[0][9]

1 = 000	2 = 00	3 = 0	4 = I	5 = II
6 = III	7 = IV	8 = V	9 = VI	10 = VII
11 = VIII	12 = IX	13 = X	14 = XI	15 = XII

Maturity Subgroup:

[ ] Please enter a value from 0 - 9

B. DISEASE REACTIONS 0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Tolerant

Bacterial

[2] Bacterial Pustule (*Xanthomonas campestris* pv. *glycines* (Nakano) Dye)

[0] Bacterial Blight (*Pseudomonas syringae* pv. *glycinea* (Coerper) Young, Dye, & Wilkie)

[0] Wildfire Blight (*Pseudomonas syringae* pv. *tabaci* (Wolf & Foster) Young, Dye, & Wilkie)

Fungal

[0] Brown Spot (*Septoria glycines* Hemmi)

B. DISEASE REACTIONS (*Continued*) 0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Tolerant

Frogeye Leaf Spot (*Cercospora sojina* Hara)

	race 1		race 2		race 3		race 4
	race 5		race 6	2	Other (*Please Specify*) Resistant to local rades in the field		

0 Target Spot (*Corynespora cassiicola* (Berk. & Curt.) Wei)

20010028 4

0 Downey Mildew (*Peronospora trifoliorum* var. *manchurica* (Naum.) Syd. ex Gäum)

0 Powdery Mildew (*Microsphaera diffusa* Cke. & Pk.)

0 Brown Stem Rot (*Phialophora gregata* (Allington & Chamberlain) W. Gams.)

0 Stem Canker (*Diaporthe phaseolorum* (Cke. & Ell.) Sacc. var. *caulivora* Athow & Caldwell)

0 Pod and Stem Blight (*Diaporthe phaseolorum* (Cke. & Ell.) Sacc. var. *sojae* (Lehman) Wehm.)

0 Purple Seed Stain (*Cercospora kikuchii* (T. Matsu. & Tomoyasu) Gardener)

0 Rhizoctonia Root Rot (*Rhizoctonia solani* Kühn)

Phytophthora Root Rot (*Phytophthora megasperma* Drechs. f. sp. *glycinea* (Kuan & Erwin))

0	race 1	0	race 8	0	race 15	0	race 22
0	race 2	0	race 9	0	race 16	0	race 23
0	race 3	0	race 10	0	race 17	0	race 24
0	race 4	0	race 11	0	race 18	0	race 25
0	race 5	0	race 12	0	race 19	0	race 26
0	race 6	0	race 13	0	race 20	0	Other (*Please Specify*) :
0	race 7	0	race 14	0	race 21		

0 Bud Blight (Tobacco Ringspot Virus)

0 Yellow Mosaic (Bean Yellow Mosaic Virus)

0 Cowpea Mosaic (Cowpea Chlorotic Virus)

0 Pod Mottle (Bean Pod Mottle Virus)

B. DISEASE REACTIONS (*Continued*) 0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Tolerant

[2] Seed Mottle (Soybean Mosaic Virus)

Nematode

20100224

Soybean Cyst Nematode (*Heterodera glycines* Ichinohe)

[1] race 1
[1] race 2
[1] race 3

[1] race 4
[1] race 5
[1] race 6

[1] race 9
[1] race 14 (former r. 4)
[ ] Other (*Please Specify*) _____

[0] Lance Nematode (*Hoplolaimus columbus* Sher)

[1] Southern Root Knot Nematode (*Meloidogyne incognita* (Kofoid & White) Chitwood)

[1] Northern Root Knot Nematode (*Meloidogyne hapla* Chitwood)

[1] Peanut Root Knot Nematode (*Meloidogyne arenaria* (Neal) Chitwood)

[0] Reniform Nematode (*Rotylenchus reniformus* Linwood & Olivera)

[1] Javanese Nematode (*Meloidogyne javanica* (Treub) Chitwood)

[ ] Other Nematode (*Please Specify*) _____

C. PHYSIOLOGICAL RESPONSES 0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Tolerant

[0] Iron Chlorosis on Calcareous Soil

[0] Phosphorus

[0] Boron

[0] Aluminum

[0] Salt

[0] Drought

[2] Other (*Please Specify*) dehiscence

D. INSECT REACTIONS 0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Tolerant

[0] Mexican Bean Beetle (*Epilachna varivestis* Mulsant)

[0] Potato Leaf Hopper (*Empoasca fabae* (Harris))

[ ] Other (*Please Specify*) _____

200100284

E. HERBICIDE REACTIONS 0 = Not Tested 1 = Susceptible 2 = Resistant

[0] Metribuzin

[0] Bentazone

[0] Sulfonylurea

[1] Glyphosate

[0] Glufosinate

[0] Pendimethalin

[ ] Other (*Please Specify*) _____

F. TRANSGENIC COMPOSITION

Has the development of the Subject Variety included the insertion or removal of genetic material? [ ] YES [X] NO
If yes, please complete the following information requests*. Use additional pages if necessary.

1. Please state the vector's name:

2. Please state the vector components:

3. Please describe the genetic material successfully transferred into the Subject Variety:

4. Please describe the insertion protocol:

* A literature citation(s) explaining the four information requests above may be an acceptable alternative to completion of the "Transgenic Composition" portion of this form.

G. BIOCHEMICAL MARKERS

Please describe any biochemical information here which you believe will be helpful in further describing the Subject Variety (*e.g.* Simple Sequence Repeats, Restriction Fragment Length Polymorphisms, Isozymic Characterization). Use additional pages if necessary.

H. COMMENTS

The United States Department of Agriculture
Agricultural Research Service
Washington, DC 20250

NOTICE OF RELEASE OF *N6201* SOYBEAN CULTIVAR

The U.S. Department of Agriculture announces the release of soybean [*Glycine max* (L.) Merr.] cultivar N6201. N6201 is a large-seeded late-maturing soybean adapted to the South Atlantic Coast and Southeastern USA and developed for its potential use in the Japanese soyfoods market. N6201 was developed by Dr. Thomas E. Carter, Jr., Research Geneticist, USDA-ARS, Raleigh, North Carolina.

N6201, previously identified as NTCPR92-40, is an F_6 –derived selection from the cross of 'Nakasennari' x 'Young'. Young was a widely grown variety in the southeastern USA in the 1980's. Nakasennari is a Japanese variety. Young and Nakasennari were crossed in 1988 at Raleigh, NC, and F_1 plants were grown at the USDA-ARS Tropical Agriculture Research Station (TARS), Isabela, PR, the following winter. All F_2 plants were grown and harvested as a single bulk at Clayton, NC in 1989. Subsequently, the seed within this bulk were selected for large seed size. The largest F_3 seed were planted at TARS, and 1 pod was picked from each plant at maturity. The F_4 seed were increased at Clayton, NC and allowed to stand well past maturity and rated for pod dehiscence in 1990. Plants apparently resistant to pod dehiscence were harvested individually and assayed for 100-seed weight and visual appearance. Progeny of promising F_4 plants were grown and bulk harvested on an individual row basis at TARS the following winter. In 1991, individual F_6 plants were harvested and assayed for 100-seed weight and visual appearance at Clayton, NC. Approximately 30 F_6 plants were selected for progeny increase at TARS that winter and were subsequently yield tested at Plymouth, NC in 1992. N6201 was yield tested at ten North Carolina locations from 1993 through 1997, and at nine and 23 southern regional locations in 1994 and 1995 as part of the USDA Cooperative Uniform Soybean Yield Tests. N6201 was also yield tested in three North Carolina environments by the North Carolina Official Variety Testing Program in 1995.

N6201 is approximately three days later in maturity than 'Brim' and is adapted to similar latitudes (approximately 31° to 37°). In ten North Carolina environments, it produced 7% lower yield than Brim in wide (95 cm) row spacings when grown under full season conditions. In these same environments, the 100-seed weight of N6201 averaged 23.1g which was larger than that of Brim (14.0g). In the 1995 USDA Cooperative Uniform Soybean Yield Tests, the average seed protein and oil concentrations on a zero percent

moisture basis for N6201 and Brim were 42.3 and 20.7 % and 42.9 and 20.2%, respectively. N6201 was moderately lodging resistant, exhibiting an average lodging score of 2.3, compared with Brim's score of 2.0 [a score of 1 indicates no lodging while 5 indicates a prostrate plant]. N6201 plant height averaged 17 cm shorter than Young. N6201 is very resistant to pod dehiscence (shattering) after maturation. N6201 has yellow seed and clear hila, purple flowers, gray pubescence, determinate growth habit, and round leaves. N6201 is resistant to frog eye leaf spot (*Cercospora sojina* Hara), bacterial pustule (*Xanthomonas campestris pv. glycines* (Nakano) Dye) and most strains of Soybean Mosaic Virus, but susceptible to root knot (*Meloidogyne*) species of nematode. In some environments, seed will exhibit a light brown mottling which can be detrimental to acceptance in the soyfoods market. The basis for this mottling is unknown at present. Experimental production is advised prior to commercial marketing to ensure high seed quality. The lower yield potential of N6201, compared to commodity-type varieties, limits its use to specialty purposes.

Breeder's seed of N6201 will be maintained by the Soybean and Nitrogen Fixation Unit, USDA-ARS, 3127 Ligon St., Raleigh, NC 27607. Small quantities can be obtained by request from Thomas E. Carter. Jr. Seed of this release will be deposited in the National Plant Germplasm System where it will be available for research purposes, including development and commercialization of new cultivars. N6201 will be submitted for U.S. Plant Variety Protection. It is requested that appropriate recognition be made if this germplasm contributes to the development of a new breeding line or cultivar. USDA intends to grant an exclusive license for production and sale of this release to North Carolina State University, Raleigh, NC. A note of this intent will be published in the Federal Register.

Floyd A. Flom

Administrator, U.S. Department of Agriculture
Agricultural Research Service

5/17/00

Date

Table 1. Agronomic performance of advanced soybean breeding line in the USDA Cooperative Uniform Soybean Yield Trials.

	Southern Region 1994 †							Southern Region 1995 ‡						
GENOTYPES	MATURITY	YIELD	100 SEED WT.	PROTEIN	OIL	LODGE	PLANT HEIGHT	MATURITY	YIELD	100 SEED WT.	PROTEIN	OIL	LODGE	PLANT HEIGHT
	Oct 1=1	bu/ac	g	%	%	1-5	inch	Oct 1=1	bu/ac	g	%	%	1-5	inch
N6201	16	45	22.1	43.8	20.4	1.9	36	16	36	19.2	42.3	20.7	2.3	33
BRIM	14	47	13.1	42.6	20.4	1.9	38	18	41	12.3	42.9	20.2	2.0	33
DILLON								14	42	14.0	42.4	20.7	1.7	32
LSD(0.05)		12.2		3.7	2.6				3.0	0.9				

† Mean of 9 locations in 1994
‡ Mean of 23 locations in 1995

Table 2. Yield of advanced soybean breeding line in Official North Carolina State Variety Testing in 1995.

	N.C. Official Variety Testing 1995 †			
GENOTYPES	Columbus Co.	Bertie Co.	Edgecombe Co.	MEAN
	bu/ac			
N6201	42	49	38	43
BRIM	48	47	48	48
DILLON	49	45	46	47
LSD(0.05)	11	8	5	5

Table 1. Agronomic performance of advanced soybean breeding line in the USDA Cooperative Uniform Soybean Yield Trials.

Southern Region 1994 †								Southern Region 1995 ‡						
GENOTYPES	MATURITY	YIELD	100 SEED WT.	PROTEIN	OIL	LODGE	PLANT HEIGHT	MATURITY	YIELD	100 SEED WT.	PROTEIN	OIL	LODGE	PLANT HEIGHT
	Oct 1=1	bu/ac	g	%	%	1-5	inch	Oct 1=1	bu/ac	g	%	%	1-5	inch
NTCPR92-40	16	45	22.1	43.8	20.4	1.9	36	16	36	19.2	42.3	20.7	2.3	33
BRIM	14	47	13.1	42.6	20.4	1.9	38	18	41	12.3	42.9	20.2	2.0	33
DILLON								14	42	14.0	42.4	20.7	1.7	32
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BRIM	48	47	48	48
DILLON	49	45	46	47
LSD(0.05)	11	8	5	5

Table 3. Yield, 100-seed weight, maturity, and sell ratio of an advanced breeding line in North Carolina during 1993-1997.

GENOTYPES	1993 Plymouth	1993 Windblow	1994 Clayton	1994 Plymouth	1994 Windblow	1995 Windblow	1995 Whiteville	1995 Plymouth	1997 Clayton	1997 Windblow	MEAN
					YIELD (BU/AC)						
N6201	42	55	41	48	44	15	45	45	51	45	43
BRIM	47	57	50	46	44	15	43	49	63	48	46
LSD(0.05)	--	--	7	6	5	3	10	4	8	6	3
					100-SEED WT. (g)						
N6201	23.9	23.3	23.1	22.3	21.1	-	23.0	23.8	24.4	23.1	23.1
BRIM	14.1	14.9	13.7	13.4	12.9	-	15.1	12.9	15.9	13.1	14.0
LSD(0.05)	-	-	1.0	0.9	0.8	-	1.9	1.2	1.0	1.2	0.8
					MATURITY (Oct. 1=1)						
N6201	-	-	27	26	24	23	23	24	32	30	26
BRIM	-	-	19	18	19	22	25	23	31	18	22
LSD(0.05)	-	-	2	1	1	3.9	7.4	1.6	3.2	4.8	4
					SWELL+ RATIO						
N6201	2.31	2.31	2.29	2.23	2.29						2.28
BRIM	2.26	2.24	2.24	2.21	2.22						2.23
LSD(0.05)	-	-	0.05	0.04	0.06						0.03

+ Swell Ratio = weight of seed after 14 hours of inbibition in water divided by initial dry weight.

Table 3. Yield, 100-seed weight, maturity, and sell ratio of an advanced breeding line in North Carolina during 1993-1997.

GENOTYPES	1993 Plymouth	1993 Windblow	1994 Clayton	1994 Plymouth	1994 Windblow	1995 Windblow	1995 Whiteville	1995 Plymouth	1997 Clayton	1997 Windblow	MEAN
					YIELD (BU/AC)						
NTCPR92-40	42	55	41	48	44	15	45	45	51	45	43
BRIM	47	57	50	46	44	15	43	49	63	48	46
LSD(0.05)	--	--	7	6	5	3	10	4	8	6	3
					100-SEED WT. (g)						
NTCPR92-40	23.9	23.3	23.1	22.3	21.1	-	23.0	23.8	24.4	23.1	23.1
BRIM	14.1	14.9	13.7	13.4	12.9	-	15.1	12.9	15.9	13.1	14.0
LSD(0.05)	-	-	1.0	0.9	0.8	-	1.9	1.2	1.0	1.2	0.8
					MATURITY (Oct. 1=1)						
NTCPR92-40	-	-	27	26	24	23	23	24	32	30	26
BRIM	-	-	19	18	19	22	25	23	31	18	22
LSD(0.05)	-	-	2	1	1	3.9	7.4	1.6	3.2	4.8	4
					SWELL+ RATIO						
NTCPR92-40	2.31	2.31	2.29	2.23	2.29						2.28
BRIM	2.26	2.24	2.24	2.21	2.22						2.23
LSD(0.05)	-	-	0.05	0.04	0.06						0.03

+ Swell Ratio = weight of seed after 14 hours of inbibition in water divided by initial dry weight.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S)
USDA- Agricultural Research Service

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER
NTCPR92-40

3. VARIETY NAME
N6201

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP, and Country)*
3127 Ligon St.
Box 7631
Raleigh NC 27607

5. TELEPHONE *(include area code)*
(919) 513-1480

6. FAX *(include area code)*
(919) 856-4598

7. PVPO NUMBER
200100924

8. Does the applicant own all rights to the variety? *Mark an "X" in appropriate block.* If no, please explain. [X] YES [ ] NO

9. Is the applicant (individual or company) a U.S. national or U.S. based company? [ ] YES [X] NO
If no, give name of country

10. Is the applicant the original owner? [X] YES [ ] NO *If no, please answer one of the following:*

a. If original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. national(s)?
N/A [ ] YES [ ] NO If no, give name of country

b. If original rights to variety were owned by a company(ies), is(are) the original owner(s) a U.S. based company?
N/A [ ] YES [ ] NO If no, give name of country

11. Additional explanation on ownership *(if needed, use reverse for extra space)*:

PLEASE NOTE:

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.

2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.

3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

STD-470-E (07-97) *(Destroy previous editions).*
Electronic version designed using WordPerfect InForms by USDA-AMS-IMB.